1   **AMENDMENTS TO THE CLAIMS**

2   This listing of claims will replace all prior versions, and listings, of claims in the application:

3   **Claims:**

4   1.   (Currently Amended) A method of adjusting time recordation, comprising:

5   sending a first message from a device to a first processor, different from the device, that

6   maintains a first time <u>that is not externally derived</u>;

7   sending a second message to a second processor that maintains a second time;

8   recording the first time when the first processor receives the first message, as a first

9   recorded time;

10   recording the second time when the second processor receives the second message, as a

11   second recorded time;

12   sending a third message from the first processor to the second processor;

13   sending a fourth message from the second processor to the first processor including

14   information indicative of the second recorded time; and

15   setting the first time of the first processor based at least in part on the sum of the second

16   recorded time and a roundtrip time for the third and fourth messages.

17   2. (original) The method of claim 1 where the first processor and second processor are coupled by an

18   asymmetric communication medium.

1   3. (original) The method of claim 1 where the first processor and second processor are coupled by an

2   asymmetric digital subscriber line.

1   4. (original) The method of claim 1 where sending a first message to a first processor that maintains a

2   first time and sending a second message to a second processor that maintains a second time are

3   separated by a predictable amount of time.

1   5. (original) The method of claim 1 where the third message includes an identification of the first

2   message and further comprising:

3   upon receipt of the third message, matching the identification of the first message with an

4   identification of the second message.

1   6. (previously presented) The method of claim 1, further comprising:

2   sending a fifth message to the first processor;

3   sending a sixth message to the second processor;

4   recording the first time when the first processor receives the fifth message, as a third recorded

5   time;

6   recording the second time when the second processor receives the sixth message, as a fourth

7   recorded time;

8   sending a seventh message from the first processor to the second processor including

9   information indicative of the third recorded time; and

10   sending an eighth message from the second processor to the first processor including a

11   correction based at least in part at least in part on the third and fourth recorded times.

1   7. (previously presented) The method of claim 1, further comprising:

2   sending a fifth message to the first processor;

3   sending a sixth message to the second processor;

4   recording the first time when the first processor receives the fifth message, as a third recorded

5   time;

6   recording the second time when the second processor receives the sixth message, as a fourth

7   recorded time;

8   sending a seventh message from the first processor to the second processor including

9   information indicative of the third recorded time;

10   sending an eighth message from the second processor to the first processor including

11   information indicative of the fourth recorded time; and

12   calculating a correction based at least in part at least in part on the third and fourth recorded

13   times.

1   8. (original) The method of claim 7 further comprising:

2   applying the correction to the first time a plurality of times at a regular interval.

1   9. (original) The method of claim 1 where the first processor is located remotely from the second

2   processor.

1   10. (original) The method of claim 9 where the first processor is located in a wellbore and the second

2   processor is located at the surface.

1   11. (original) The method of claim 10 where the first processor is coupled by a network to a plurality

2   of tools that send time-based measurements to the second processor.

1   12. (original) The method of claim 1 where the roundtrip time for the third and fourth messages is an

2   amount of time from the sending of the third message to the receipt of the fourth message.

1   13. (currently amended) A method of adjusting time recordation, comprising:

2   sending a first message from a device to a first processor, different from the device, that

3   maintains a first time that is not externally derived;

4   sending a second message to a second processor that maintains a second time;

5   recording the first time when the first processor receives the first message, as a first recorded

6   time;

7   recording the second time when the second processor receives the second message, as a second

8   recorded time;

9   sending a third message from the second processor to the first processor including data based at

10   least in part on the second recorded time; and

11   adjusting the first time based on a correction that is based at least in part on the data and the

12   first recorded time.

1   14. (previously presented) The method of claim 13 where the data is the second recorded time.

1   15. (original) The method of claim 13 where the data is equal to the correction.

Response to Non-Final Office Action
Mailed July 23, 2008

1   16. (original) The method of claim 13 where sending a first message to a first processor that maintains

2   a first time and sending a second message to a second processor that maintains a second time are

3   separated by a predictable amount of time.

1   17. (previously presented) The method of claim 13 where the third message includes an identification

2   of the second message and further comprising:

3   upon receipt of the third message, matching the identification of the second message with an

4   identification of the first message.

1   18. (original) The method of claim 13 where the first processor and second processor are coupled by an

2   asymmetric communication medium.

1   19. (original) The method of claim 13 where the first processor and second processor are coupled by an

2   asymmetric digital subscriber line.

1   20. (original) The method of claim 13 where adjusting the first time occurs at regular intervals.

1   21. (original) The method of claim 13 where the first processor is located remotely from the second

2   processor.

1   22. (original) The method of claim 21 where the first processor is located in a wellbore and the second

2   processor is located at the surface.

1   23. (original) The method of claim 22 where the first processor is coupled by a network to a plurality

2   of tools that send time-based measurements to the second processor.

1   24. (original) The method of claim 13 where adjusting the first time includes moving the first time

2   forward or backward by an amount and, after a predetermined time, moving it forward or backward by

3   the same amount again.

1   25. (currently amended) A computer program, stored on a tangible storage medium, for adjusting time

2   recordation, the program including executable instructions that cause one or more computers to:

3   send a first message from a device to a first processor, different from the device, that maintains

4   a first time <u>that is not externally derived</u>;

5   send a second message to a second processor that maintains a second time;

6   record the first time when the first processor receives the first message, as a first recorded time;

7   record the second time when the second processor receives the second message, as a second

8   recorded time;

9   send a third message from the first processor to the second processor;

10   send a fourth message from the second processor to the first processor including information

11   indicative of the second recorded time; and

12   set the first time of the first processor based at least in part on the sum of the second recorded

13   time and the roundtrip time for the third and fourth messages.

1   26. (original) The computer program of claim 25 where the first processor and second processor are

2   coupled by an asymmetric communication medium.

1   27. (original) The computer program of claim 25 where the first processor and second processor are

2   coupled by an asymmetric digital subscriber line.

1   28. (original) The computer program of claim 25 where the one or more computers are caused to send

2   a first message to a first processor that maintains a first time and send a second message to a second

3   processor that maintains a second time within a predictable amount of time.

1   29. (original) The computer program of claim 25 where the third message includes an identification of

2   the first message and further including executable instructions that cause one or more computers to:

3   upon receipt of the third message, match the identification of the first message with an

4   identification of the second message.

1   30. (previously presented) The computer program of claim 25 further including executable instructions

2   that cause one or more computers to:

3   send a fifth message to the first processor;

4   send a sixth message to the second processor;

5   record the first time when the first processor receives the fifth message, as a third recorded

6   time;

7   record the second time when the second processor receives the sixth message, as a fourth

8   recorded time;

9   send a seventh message from the first processor to the second processor including information

10   indicative of the third recorded time; and

11   send an eighth message from the second processor to the first processor including a correction

12   based at least in part on the third and fourth recorded times.

1   31. (previously presented) The computer program of claim 25 further including executable instructions

2   that cause one or more computers to:

3   send a fifth message to the first processor;

4   send a sixth message to the second processor;

5   record the first time when the first processor receives the fifth message, as a third recorded

6   time;

7   record the second time when the second processor receives the sixth message, as a fourth

8   recorded time;

9   send a seventh message from the first processor to the second processor including information

10   indicative of the third recorded time;

11   send an eighth message from the second processor to the first processor including information

12   indicative of the fourth recorded time; and

13   calculate a correction based at least in part on the third and fourth recorded times.

1   32. (original) The computer program of claim 31 further including executable instructions that cause

2   one or more computers to:

3   apply the correction to the first time a plurality of times at a regular interval.

1   33. (original) The computer program of claim 25 where the first processor is located remotely from the

2   second processor.

1   34. (original) The computer program of claim 33 where the first processor is located in a wellbore and

2   the second processor is located at the surface.

1   35. (original) The computer program of claim 34 where the first processor is coupled by a network to a

2   plurality of tools that send time-based measurements to the second processor.

1   36. (currently amended) A computer program, stored on a tangible storage medium, for adjusting time

2   recordation, the program including executable instructions that cause one or more computers to:

3   send a first message from a device to a first processor, different from the device, that maintains

4   a first time that is not externally derived;

5   send a second message to a second processor that maintains a second time;

6   record the first time when the first processor receives the first message, as a first recorded time;

7   record the second time when the second processor receives the second message, as a second

8   recorded time;

9   send a third message from the second processor to the first processor including data based at

10   least in part on the second recorded time; and

11   adjust the first time based on a correction that is based at least in part on the data and the first

12   recorded time.

1   37. (previously presented) The computer program of claim 36 where the data is the second recorded

2   time.

1   38. (original) The computer program of claim 36 where the data is equal to the correction.

1   39. (original) The computer program of claim 36 where the one or more computers are caused to send

2   a first message to a first processor that maintains a first time and send a second message to a second

3   processor that maintains a second time within a predictable amount of time.

1   40. (previously presented) The computer program of claim 36 where the third message includes an

2   identification of the second message and further including executable instructions that cause one or

3   more computers to:

4   upon receipt of the third message, match an identification of the first message with the

5   identification of the second message.

1   41. (original) The computer program of claim 36 where the first processor and second processor are

2   coupled by an asymmetric communication medium.

1   42. (original) The computer program of claim 36 where the first processor and second processor are

2   coupled by an asymmetric digital subscriber line.

1   43. (original) The computer program of claim 36 where adjusting the first time occurs at regular

2   intervals.

1   44. (original) The computer program of claim 36 where the first processor is located remotely from the

2   second processor.

1   45. (original) The computer program of claim 44 where the first processor is located in a wellbore and

2   the second processor is located at the surface.

1   46. (original) The computer program of claim 45 where the first processor is coupled by a network to a

2   plurality of tools that send time-based measurements to the second processor.

1   47. (currently amended) A system, comprising:

2   a first processor that maintains a first time <u>that is not externally derived</u>;

3   a communication medium coupled to the first processor; and

4   a second processor that maintains a second time coupled to the communications medium;

5   where

6   the first processor is adapted to receive a first message from a device different from the first

7   processor;

8   the second processor is adapted to receive a second message;

9   the first time is recorded when the first processor receives the first message, as a first recorded

10   time;

11   the second time is recorded when the second processor receives the second message, as a

12   second recorded time;

13   the first processor is adapted to send a third message to the second processor;

14   the second processor is adapted to send a fourth message to the first processor including

15   information indicative of the second recorded time; and

16   the first time is set based at least in part on the sum of the second recorded time and the

17   roundtrip time for the third and fourth messages.

1   48. (original) The system of claim 47 where the communication medium is asymmetric.

1   49. (original) The system of claim 47 where the communication medium is an asymmetric digital

2   subscriber line.

1   50. (original) The system of claim 47 where the first and second messages are received a predictable

2   amount of time apart.

1   51. (original) The system of claim 47 where the third message includes an identification of the first

2   message and the second processor is adapted to, upon receipt of the third message, match the

3   identification of the first message with an identification of the second message.

1   52. (previously presented) The system of claim 47 where:

2   the first processor is adapted to receive a fifth message;

3   the second processor is adapted to receive a sixth message;

4   the first time is recorded when the first processor receives the fifth message, as a third recorded

5   time;

6   the second time is recorded when the second processor receives the sixth message, as a fourth

7   recorded time;

8   the first processor is adapted to send a seventh message to the second processor including

9   information indicative of the third recorded time; and

10   the second processor is adapted to send an eighth message to the first processor including a

11   correction based at least in part on the third and fourth recorded times.

1   53. (previously presented) The system of claim 47 where:

2   the first processor is adapted to receive a fifth message;

3   the second processor is adapted to receive a sixth message;

4   the first time is recorded when the first processor receives the fifth message, as a third recorded

5   time;

          Response to Non-Final Office Action
Mailed July 23, 2008

6   the second time is recorded when the second processor receives the sixth message, as a fourth

7   recorded time;

8   the first processor is adapted to send a seventh message to the second processor including

9   information indicative of the third recorded time;

10   the second processor is adapted to send an eighth message to the first processor including

11   information indicative of the fourth recorded time; and

12   the first processor is adapted to calculate a correction based at least in part on the third and

13   fourth recorded times.

1   54. (original) The system of claim 53 where:

2   the first processor applies the correction to the first time a plurality of times at a regular

3   interval.

1   55. (original) The system of claim 47 where the first processor is located remotely from the second

2   processor.

1   56. (original) The system of claim 55 where the first processor is located in a wellbore and the second

2   processor is located at the surface.

1   57. (original) The system of claim 56 where the first processor is coupled by a network to a plurality of

2   tools that send time-based measurements to the second processor.

1   58. (currently amended) A system, comprising:

2   a first processor that maintains a first time that is not externally derived;

3   a communication medium coupled to the first processor; and

4   a second processor that maintains a second time coupled to the communications medium;

5   where

6   the first processor is adapted to receive a first message from a device different from the first

7   processor;

8   the second processor is adapted to receive a second message;

9   the first time is recorded when the first processor receives the first message, as a first recorded

10   time;

Response to Non-Final Office Action
Mailed July 23, 2008

11   the second time is recorded when the second processor receives the second message, as a

12   second recorded time;

13   the second processor is adapted to send a fourth message to the first processor including data

14   based at least in part on the second recorded time; and

15   the first time is adjusted based on a correction that is based at least in part on the data and the

16   first recorded time.

1   59. (previously presented) The computer system of claim 58 where the data is the second recorded

2   time.

1   60. (original) The computer system of claim 58 where the data is equal to the correction.

1   61. (original) The computer system of claim 58 where the first and second messages are received a

2   predictable amount of time apart.

1   62. (original) The computer system of claim 58 where the fourth message includes an identification of

2   the second message and the second processor is adapted to, upon receipt of the fourth message, match

3   an identification of the first message with the identification of the second message.

1   63. (original) The computer system of claim 58 where the communication medium is asymmetric.

1   64. (original) The computer system of claim 58 where the communication medium is an asymmetric

2   digital subscriber line.

1   65. (original) The computer system of claim 58 where adjusting the first time occurs at regular

2   intervals.

1   66. (original) The computer system of claim 58 where the first processor is located remotely from the

2   second processor.

1   67. (original) The computer system of claim 66 where the first processor is located in a wellbore and

2   the second processor is located at the surface.

           Response to Non-Final Office Action
Mailed July 23, 2008

1   68. (original) The computer system of claim 67 where the first processor is coupled by a network to a

2   plurality of tools that send time-based measurements to the second processor.